of this grade should not be introduced into the American schools to the great advantage of our pupils. The advantage would consist, not in the facts and statistics with which their memories are burdened, but in the logical reasoning processes by which the pupil is led to dwell only on the important factors that control the meterological phenomena.—*C. A.*

PERNTER'S THEORY OF THE RAINBOW.

On page 503 of the MONTHLY WEATHER REVIEW for November, 1904, we published an article by Rev. D. Hammer, S. J., on "Airy's theory of the rainbow." Prof. J. M. Pernter has called the attention of the author to the fact that fig. 2, page 505, might convey the erroneous idea that all the rays when prolonged meet in one point.

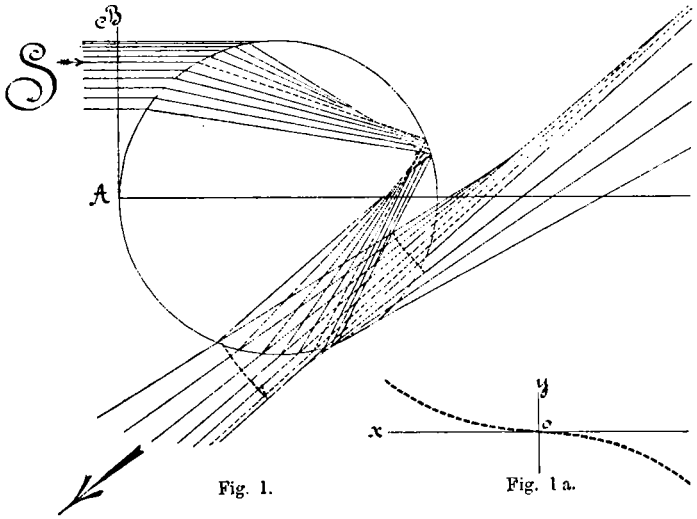

Fig. 1. Fig. 1a.

FIGS. 1 and 1a.—Pernter's theory of the rainbow.

The exact path of these rays has been worked out very carefully and laboriously by Professor Pernter in his memoir entitled "Ein Versuch, der richtigen Theorie des Regenbogens Eingang in die Mittelschulen zu verschaffen," and the accompanying figs. 1 and 1a from this work, which we publish at Mr. Hammer's suggestion, explain more accurately than that on page 505 the exact paths followed by the rays and the method of their interference so as to form caustics and bands of colors. Professor Pernter has made the whole process of reflection and interference so plain by graphic constructions that his work, which ought to be translated among the classics of science, is commended to high school teachers throughout the country.—*C. A.*

METEOROLOGY IN HAITI.

Under date of February 16, Prof. R. T. Constantine, Professor of Physics in the St. Louis Gonzaga College, Port au Prince, Haiti, informs the Chief of the Weather Bureau that he has organized in that Republic a society which has adopted the name "The Astronomical and Meteorological Society of Port au Prince." This society has been officially approved by the Minister of the Interior, who promises the hearty support of the government. The first business of the society will be to establish meteorological stations at different points in the Republic, in order to determine the climatological elements proper to each of these localities and to the country in general. In the beginning only thermometric stations will be established, where maximum and minimum temperatures, winds, hydrometeors, thunderstorms, and earthquakes will be observed. In order to equip ten climatological stations Professor Constantine hopes that the U. S. Weather Bureau will contribute the necessary apparatus. But as this is quite beyond the legal power of the Chief of Bureau, we may express the hope that the friends of science in America will come to the help of this new enterprise. The study of climate in its relation to agriculture has been prosecuted for a century very diligently in the Temperate Zone, but very little is known of this important subject with reference to tropical climates.

It may, however, be added that Port au Prince, Haiti, will be established as a regular telegraphic reporting station of the U. S. Weather Bureau during the hurricane season. It will have the complete outfit of a first-class station, and will be installed by a regular Weather Bureau observer, and then left in charge of Professor Constantine.—*C. A.*

WEATHER BUREAU MEN AS INSTRUCTORS.

Mr. James L. Bartlett, Observer, Madison, Wis., on February 8 addressed 200 members of the Wisconsin Agricultural Experiment Association, composed of graduates of the College of Agriculture of the University of Wisconsin. He discussed the value of the Weather Bureau to the farmers and explained the use of the weather map.

Beginning with next fall, Mr. Bartlett's course at the University of Wisconsin will extend throughout the college year, the second semester being devoted more particularly to the study of climatology.

Mr. S. S. Bassler, Local Forecaster at Cincinnati, Ohio, on February 11 delivered an address on "Weather" before the Oxford Farmers' Institute at Oxford, Ohio.

Prof. Henry J. Cox, Chicago, Ill., has begun a series of lectures in that city and vicinity, illustrating with lantern slides the movements of storms, cold waves, and other atmospheric conditions and their effects. He treats in a general way the forecast work of the Weather Bureau. The first lecture was delivered before the Church Men's Club at Englewood, Ill., on February 20; the second was given on February 28 at the regular monthly meeting of the Chicago Academy of Sciences.

The executive committee of the Geographic Society of Chicago, which has decided to publish a bulletin on the teaching of meteorology, has requested Professor Cox to act as chairman of a committee for the preparation of this bulletin.

Mr. W. C. Devereaux, Assistant Observer, Ithaca, N. Y., will give a course in agricultural meteorology and climatology at the Agricultural College of Cornell University during the last half of the present school year. The course includes one lecture and two quiz and laboratory periods each week, and the following lectures will be given during the term:

1. Temperature. Radiant energy; effect of different rays upon vegetation; importance of diffused daylight for vegetation; reflected heat; terrestrial radiation; soil temperatures; sensible temperatures.
2. Precipitation. Causes of unequal distribution and effects of; data to be considered; capacity of soils; plant requirements; water for irrigation; and the value of reliable observations.
3. Floods. Classes; river basins; sources of flood water; rise, crest, velocity, and methods of predicting stages.
4. Weather. Defined; changes produced by passage of cyclones and anticyclones; hurricanes; cold waves.
5. Weather maps. Method of preparing daily map; practise in preparing.
6. Forecasting the weather. Method employed; meaning of terms used; results obtained.
7. Practise forecasting. Practise forecasts made from weather maps and compared with resulting conditions; special types considered.
8. Long-range forecasts. Defined; relative effect upon the weather of different factors; results.
9. Climate. Defined; effects of latitude, altitude, oceans, forests, etc.
10. Climate and plants. Distribution and development of plants as depending on climate.
11. Climate and man. Effects of climate on the human race.
12. Meteorology in the schools. The extent to which meteorology is taught in the schools to-day and how it can be increased.
13. The meteorological services of the world. A history of the different services and their importance.